

Groundwater Recharge Program Construction Loan Application

Public Draft – January 24, 2003

State of California
The Resources Agency
Department of Water Resources
Division of Planning and Local Assistance
P. O. Box 942836
Sacramento, CA 94236 -0001

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Introduction

On March 7, 2000, California voters approved the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act (Proposition 13, or the Bond Law). The Bond Law is now codified in Division 26 (commencing with Section 79000) of the California Water Code. The Groundwater Recharge Program of the Bond Law (Chapter 8, Article 4 of Division 26) authorizes the California Department of Water Resources (DWR) to provide loans to local agencies for the construction of projects that enhance groundwater recharge.

This application package is for the fiscal year 2002-2003 funding cycle. A total of \$8,720,000 has been allocated for the Groundwater Recharge Program for this funding cycle. Total commitments will not exceed \$8,720,000 during this funding cycle; and no project may receive more than \$5,000,000. No feasibility study funding is available in the fiscal year 2002-03 funding cycle.

This application is for applicants seeking a construction loan for a groundwater recharge project. This Groundwater Recharge Program construction loan application is also available on our web site at:

<http://www.dpla2.water.ca.gov/grants-loans/gwater-loan/app.shtml>

Who May Apply

Applicants must be a local agency as defined by Section 79151 of the California Water Code. Local agencies that wish to collaborate on a project may elect to use a contractor-subcontractor relationship, joint venture partnership, or a joint powers authority. Contracts will only be executed with one applicant. The application must clearly indicate who will sign the contract and the nature of the agreement with the other participants, as discussed below.

Applicants that are joint venture partnerships must identify one partner as the contracting party responsible for payments, reporting, and accounting. The application must include a detailed description of how the partners will operate, including the allocation of decision-making authority and liability. The application should identify the tasks to be performed by the different entities and the costs of each task.

Eligible Projects

This loan program is intended to help fund groundwater recharge projects designed to construct, expand, renovate, or restructure facilities used for the purpose of groundwater recharge and to acquire additional land for recharge facilities. This application is designed for projects either ready for or nearing construction.

If the project proposed for funding in this application is to be phased, or is a part of a larger recharge program, the application must be completed for a stand-alone phase of the project. Only the facilities proposed in this application will be considered when determining eligibility and ranking the application. The project facilities and operations described should be consistent throughout the application, including, but not limited to, Sections A-4, B-1, C-3, and G. Successful applicants will be contractually obligated to complete all project phases that comprise the overall project scope on which DWR's findings of eligibility are based. For a given project, this requirement applies equally if it is funded exclusively by a Proposition 13 groundwater recharge construction loan, or if it is funded from combined sources, including the loan.

Geographic Scope

Projects throughout California will be considered for funding.

Conflict of Interest

All participants are subject to State and federal conflict of interest laws. Failure to comply with these laws, including business and financial disclosure provisions, will result in the application being rejected and any subsequent contract being declared void. Other legal action may also be taken. Before submitting an application, applicants are urged to seek legal counsel regarding conflict of interest requirements. Applicable statutes include, but are not limited to, California Government Code Section 1090 and California Public Contract Code Sections 10410 and 10411.

Confidentiality

Each application will be reviewed by staff of DWR, as well as by staff of other CALFED participating agencies. The applications will also be reviewed by the Conjunctive Use Advisory Committee, established in accordance with California Water Code Section 79182. Geographically balanced, this Committee is composed of technically qualified representatives of local water agencies, environmental interests, agricultural labor interests, tribal interests, and interests representing farmers who use groundwater. Once the application has been submitted to DWR, any privacy rights as well as other confidentiality protections afforded by law, with respect to the application package, will be waived.

How to Submit an Application

A completed application must be received no later than 5:00 p.m., June 5, 2003. All forms, attachments, and supporting documentation described in this application must be submitted together at one time. Applications received after this time will be returned unopened to the applicant. Incomplete applications will not be evaluated. Appendix I is a checklist of all the requirements for a completed application.

Applicants must submit one (1) original, five (5) hard copies, and one (1) electronic copy of the application. Electronic copies must be in MS Word and/or Excel compatible formats or PDF on 3½" diskette(s) or CD-ROM. Include one original and two hard copies of all supporting documentation, and submit all information to the following address:

By U.S. mail:

California Department of Water Resources
Division of Planning and Local Assistance
Post Office Box 942836
Sacramento, California 94236-0001
Attn: Linda Buchanan
Telephone: (916) 651-9645

Or overnight courier to:

California Department of Water Resources
Division of Planning and Local Assistance
1416 Ninth Street, Room 338
Sacramento, California 95814
Attn: Linda Buchanan

Or hand deliver to:

901 P Street, Lobby, Sacramento, California
Attn: Linda Buchanan

Three informational workshops will be conducted to address applicant questions, and to provide general assistance to applicants in preparing their application. Two additional workshops will be held to provide detailed assistance in the preparation of the water supply yield analysis (Section C-3) and economic justification (Section G). The dates and locations of the workshops are provided in the following schedule:

Schedule (The dates below are tentative and will be finalized after the application is approved for release)

April 3, 2003	Application packages distributed to requesting parties and made available on the DWR web site http://www.dpla2.water.ca.gov/grants-loans/
April 10, 2003	Proposition 13 Application Workshop 9:30 a.m. Colusa County Agricultural Commission Conference Room 100 Sunrise Blvd Colusa, CA 95935
April 15, 2003	Proposition 13 Application Workshop 9:30 a.m. DWR San Luis Field Division Office 31770 Gonzaga Road Gustine, CA 95322
April 16, 2003	Proposition 13 Application Workshop 10:30 a.m. Lancaster City Library 601 W. Lancaster Blvd Lancaster, CA 93534
May 13, 2003	Water Supply Yield and Economics Workshop 9:00 am Bonderson Bldg Auditorium 901 P Street Sacramento, CA 95814
May 15, 2003	Water Supply Yield and Economics Workshop 10:30 am Lancaster City Library 601 W. Lancaster Blvd Lancaster, CA 93534
June 5, 2003	Completed applications due to DWR by 5:00 p.m.
June 16, 2003	DWR staff begins technical, financial, and economic assessments of threshold criteria and prepares project/program summaries and initial recommendations for ranking.

September 4, 2003	Public meeting - DWR considers the recommendations of Conjunctive Use Advisory Committee, reviews the previous evaluations and makes recommendations of projects to be funded at a public meeting to be held in Sacramento.
November 10, 2003	Selections approved by DWR Director and letters of commitment for selected projects mailed to applicants selected for award.
June 1, 2004	Contracts for selected applicants executed.

Application Evaluation and Selection Process

The Application

All of the information requested in Parts A through H of the application must be provided. Each application will first be evaluated for completeness using the checklist contained in Appendix I. Applications not containing all of the attachments listed in Appendix I will not be considered for funding. Complete applications will be evaluated for compliance with the eligibility criteria and then scored based on the Ranking Criteria described below.

Eligibility Criteria

Applications for construction loans for groundwater recharge projects must meet all Eligibility Criteria to be considered for funding. The Eligibility Criteria, which must be supported by documentation contained in Sections A through C of this application package, include the following:

Section A-13	Agency Authority
Section A-15	Urban Water Management Planning Act Compliance
Section B	Project Type Eligibility
Section C-1	Engineering and Hydrogeologic Feasibility Certification

Specific details of each Eligibility Criterion are provided in Sections A through C of the application.

Ranking Criteria

Applications determined to be complete and meeting eligibility criteria will be scored by DWR staff based on the Ranking Criteria contained in Table 1 and described in Part H. Information provided in Parts A through G of the application will support the evaluation. For each Ranking Criterion, applicants will be scored on a scale of 1 to 5, with 1 being “Low” and 5 being “High.” The score for each criterion will then be multiplied by a weighting factor to achieve a weighted score for each criterion. The sum of the weighted scores will result in a total score for the application. The maximum score for this application is 35 points.

Based on the evaluations and preliminary rankings by DWR staff, the Conjunctive Use Advisory Committee will consider the applications and develop a list of recommended projects for funding. The list of recommended projects will be presented to both the public and CALFED Management Group or its successor, for review before final funding determinations are made by DWR. For the public meeting, applicants and other interested parties will be notified of the meeting by the following means: by mail; by a notice placed on the DWR website; and by a news release, informing the public of the date, time and location of the meeting.

Preparation of contracts will begin as soon as grant awards are made; however, depending on the complexity of each contract and the readiness of the applicant, it may take considerable time to develop and execute contracts for the successful applications. For the purposes of loan funding, applicants should not start construction work on their projects until their contracts with the State have been executed. Construction work performed before the execution of a funding contract with the State may not be eligible for reimbursement, or as a part of the applicant’s cost share. Funding contracts are not executed until signed by authorized representatives of the applicant and DWR.

Table 1
Ranking Criteria

Criteria	High (5)	M/H (4)	Medium (3)	M/L (2)	Low (1)	Weight	Total
H-1. Need for the project						1	
H-2. Basin-wide planning						1	
H-3. Groundwater management program						1	
H-4. Readiness to proceed						1	
H-5. Economic efficiency						1	
H-6. Adequacy of supporting documentation						2	
TOTAL SCORE							
Maximum Possible Score							35

Part A

Organizational, Financial, and Legal Information

A-1 Application Cover Sheet

This application is for a groundwater recharge construction loan under the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act.

The _____
(Legal Name of the Applicant)

of _____
(Mailing Address of the Applicant)

of the County of _____, State of California,
does hereby apply to the California Department of Water Resources for a loan in the amount of
\$ _____ for construction of the following project under the Safe Drinking
Water, Clean Water, Watershed Protection and Flood Protection Act:

(Specific Project Title)

By _____ Date _____
(Original signature of authorized representative, see Section A-5)

(Print or type name of authorized representative)

Title _____

Telephone (____) _____

Fax (____) _____

E-mail _____

**Mark as Attachment A-1
and include as the first page of the application.**

A-2 Agency Representatives

Project contact person: Name _____

Title _____

Telephone (____) _____ Fax (____) _____

E-mail _____

Address _____

City _____ Zip _____

Alternate contact person: Name _____

Title _____

Telephone (____) _____ Fax (____) _____

E-mail _____

Address _____

City _____ Zip _____

Type of Organization: _____
(Water District, Irrigation District, City, etc.)

California Assembly Representative(s): _____

District No(s). _____

California Senate Representative(s): _____

District No(s). _____

Attach a copy of agency charter or enabling authority, or the mutual water company's articles of incorporation. Also, provide a list of the names and titles of the agency's or company's officers.

Mark as Attachment A-2

A-3 Project Cost

Prepare a proposed project budget (complete Attachment A-3 on next page, "Project Summary Budget—Capital Costs", see Table A-3 for a sample project summary budget). Contingency costs of at least 5% must be included in the budget. The contingency percentage used here must agree with the contingency percentage used in Section C-11 and Table G-2.

Provide financing information about the proposed project below and include supporting documentation. Any financing in addition to this loan application that has not been secured, including other grants and loans, will not be considered when determining financial feasibility. (*See below*).

Total cost of project:¹ \$ _____

Amount to be funded under the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act: (loan request amount)

Amount to be funded by the applicant \$ _____

Indicate applicant's source of funds: _____

Amount to be funded externally \$ _____

Lender: _____ Lender: _____

Amount: \$ _____ Amount: \$ _____

Interest Rate: _____ Percent Interest Rate: _____ Percent

Term: _____ Years Term: _____ Years

Annual Payment: \$ _____ Annual Payment: \$ _____

Mark as Attachment A-3

¹ If the project proposed for funding in this application is to be phased, or is a part of a larger program, the application must be completed for a stand-alone phase of the project. Only the facilities proposed in this application will be considered when determining eligibility and ranking the application. The project described should be consistent throughout the application, including, but not limited to, Sections A-4, B-1, C-3, C-11, and G.

Attachment A-3

Project Summary Budget—Capital Costs

	Capital Cost Category	Item Description	Who will perform work?	Extended Cost	Contingency % Used	Contingency Cost	Subtotals
1	Land Purchase /Easement						
2	Planning/Design/ Engineering						
3	Sum of Materials Costs						
4	Sum of Labor Costs ¹						
5	Sum of Equipment/Rentals						
6	Sum of Environmental Mitigation/ Enhancement Costs						
7	PROJECT SUMMARY (Sum 1 through 6)						
8	Construction Administration Costs						
9	Agency Overhead Costs						
10	Legal & License Fees						
11	Other Costs						
12	Grand Total All Costs (Sum 7 through 11)						2

¹ Applicants should consider the applicability of prevailing wage laws in developing the estimate of project costs.

² Place this number in Total Cost of Project, Part A-3.

Table A-3
Sample Project Summary Budget—Capital Costs

	Capital Cost Category	Item Description	Who will perform work?	Extended Cost	Contingency % Used	Contingency Cost	Subtotals
1	Land Purchase /Easement	Purchase 5 acres for recharge @ \$2,000/acre	XYZ Water District	\$10,000	5%	\$500	\$10,500
2	Planning/Design/Engineering	Take 50% design to final design	LV&W-B Engrs	\$25,000	5%	\$1,250	\$26,250
3	Sum of Materials Costs	From detailed cost estimate provided in Part C	Contractor	\$1,250,000	10%	\$125,000	\$1,375,000
4	Sum of Labor Costs ³	From detailed cost estimate provided in Part C	Contractor	\$1,500,000	10%	\$150,000	\$1,650,000
5	Sum of Equipment/Rentals	From detailed cost estimate provided in Part C	Contractor	\$500,000	10%	\$50,000	\$550,000
6	Sum of Environmental Mitigation/Enhancement Costs	From detailed cost estimate provided in Part C	Contractor	\$100,000	10%	\$10,000	\$110,000
7	PROJECT SUMMARY (Sum 1 through 6)			\$3,385,000		\$336,750	\$3,721,750
8	Construction Administration Costs	5% of Estimated Total Construction Costs	LV&W-B Engrs	\$167,500	10%	\$16,750	\$184,250
9	Agency Overhead Costs	12% of Project Summary Costs	XYZ Water District	\$406,200	5%	\$20,310	\$426,510
10	Legal & License Fees	Legal review of contracts	XYZ Water Dist staff counsel	\$20,000	5%	\$1,000	\$21,000
11	Other Costs	CEQA/NEPA costs & bid costs	D&Y Envir, plus XYZ staff	\$100,000	10%	\$10,000	\$110,000
12	Grand Total All Costs (Sum 7 through 11)			\$4,078,700		\$384,810	\$4,463,510⁴

³ Applicants should consider the applicability of prevailing wage laws in developing the estimate of project costs.

⁴ Place this number in Total Cost of Project, Part A-3.

A-4 Plat Map of Service Area

Provide a plat map of the service area responsible for project financing, including a list of all property parcels affected by the project.

Mark as Attachment A-4

A-5 Authorizing Resolution

Provide a resolution adopted by the applicant's governing body designating an authorized representative to file an application for a groundwater recharge loan under this program. Appendix II may be used as a model for this resolution.

Mark as Attachment A-5

A-6 Financial Statements

Attach copies of audited financial statements for the last three fiscal years of operation. Include balance sheets, income statements, sources and uses of funds statements, and the most recent annual budget. Please provide separate detail for the water enterprise fund, if applicable to your organization.

Mark as Attachment A-6

A-7 Cash Reserves

List all cash reserves (restricted and unrestricted) and any planned uses of those reserves.

Mark as Attachment A-7

A-8 Existing Debt

Mark as Attachment A-8

A-9 Repayment Method

Indicate the proposed repayment method for any loans required for project financing:

☐ 1. Standby charges

☐ 2. Excess revenues

Source:

☐ 3. Cost savings

☐ 4. User fees: ☐ Flat rate ☐ Quantity of water used

☐ 5. Assessments

☐ 6. Other (*describe*):

If methods 1, 4, and 5 are to be used for loan repayment, include a proposed plan to divide costs among the system users. Use dollar estimates.

Mark as Attachment A-9

A-10 Loan Security

Explain how any loans required for project financing will be secured if required by the lender (*dedicated revenues, assessments, etc.*). Cite your organization's statutory authority to use this method of loan security.

Statutory Authority:

Mark as Attachment A-10

A-11 Rate and Service Structure

Mark as Attachment A-11

A-12 Population Data *(Not needed for agricultural projects)***Total population of service area that will repay the loan:**

Year-round/Permanent: _____

As of: _____
(Date)

Seasonal/Part-time: _____

As of: _____
(Date)Seasonal peak population: _____
(If applicable)

Persons per household: _____

Source of information on population data:

Projected population:

Current Year + 5: _____

Current Year + 10: _____

Source of information on projected population:

Household median income of water service area: \$ _____ As of: _____
(Date)**Source of information on household median income:**

What tax rate areas are included in the area to benefit from or pay for the project? *(This information is available from the county assessor.)*

County median income: *(Available from the county planning department)*\$ _____ As of: _____
(Date)**Source of information on county median income:**

Mark as Attachment A-12

A-13 Agency Authority

Submit a written legal opinion from the applicant's attorney addressing the following six questions pertaining specifically to this funding application. The response to each question must include a citation of statutory authority or other reference.

1. Does the applicant have the legal authority to enter into a funding contract with the State of California?
2. What is the statutory authority under which the applicant was formed and is authorized to operate?
3. Is the applicant required to hold an election before entering into a funding contract with the State?
4. Does the applicant have the legal authority to levy assessments and charges sufficient to repay any loans that may be needed for project financing? (Also, address loan security, Part A-10).
5. Will the funding agreement between the applicant and the State of California be subject to review and/or approval by other government agencies?
6. If yes, identify all such agencies (e.g., Local Area Formation Commission, local governments, U.S. Forest Service, California Coastal Commission, California Department of Health Services, etc.).
7. Describe any pending litigation that may impact the financial condition of the applicant, the operation of the water facilities, or the applicants ability to complete the proposed construction project. If none is pending, so state.

If DWR determines that the applicant does not have the necessary authority to contract with the State, the application will not be eligible for funding and will not be reviewed.

Mark as Attachment A-13

A-14 Operation and Maintenance (O & M)

Provide a detailed summary of the O & M costs for your current water facilities. List the source of revenue to fund such costs.

Provide a detailed estimate of O & M costs for the new or expanded facilities proposed for funding under this application and the impact of these costs on your current O&M budget. The costs shown here must match the costs shown for O&M costs in Section G, Table G-3. Identify a source of funds to address any additional O&M costs.

Mark as Attachment A-14

A-15 Urban Water Management Plan (UWMP) Compliance

The Urban Water Management Planning Act (UWMPA or the Act), California Water Code Section 10610 et seq., provides that urban water suppliers must prepare, adopt, and submit urban water management plans to DWR in compliance with the Act to be eligible to receive Proposition 13 funding. Applicants or participating agencies that are urban water suppliers as defined in California Water Code Section 10617 must provide evidence of compliance with the UWMP Act. It is not necessary to submit the Urban Water Management Plan to demonstrate compliance. For questions on the UWMPA, or on your compliance with the Act, contact Judy Colvin at (916) 651-9665.

If DWR determines that the applicant or a participating agency is required to submit a complete Urban Water Management Plan to DWR, and a complete plan has not been submitted, the application will not be eligible for funding and will not be reviewed.

Mark as Attachment A-15

Part B

Project Type Eligibility

B-1 Map and Narrative Description of Project

Provide a detailed narrative description of the proposed groundwater recharge facilities. Discuss the purpose of the project and the project goals in the context of your agency's water management plans. If the project consists of multiple components, such as diversion, conveyance, groundwater recharge, and extraction facilities, describe all of them and their relationship to one another.

If the project proposed in this application is part of a larger groundwater recharge project or program, clearly describe the facilities or operations that are a part of this proposal, but also describe the relationship of the project to existing facilities or to other planned facilities. The project described should be consistent throughout the application, including, but not limited to, Sections A-4, B-1, C-3, C-11, and G.

Provide a detailed map of the project area, preferably a 1:24,000 scale copy or original on a 7.5-minute USGS quad sheet base. Mark the location of the project components, and include the approximate latitude and longitude of the proposed facilities. Identify the water source, and all conveyances from the water source to the proposed project, on the map.

If DWR determines that the project described in the application does not meet the definition of a groundwater recharge project, the application will not be eligible for funding and will not be reviewed.

Mark as Attachment B-1

B-2 Legal Description of Project Site

Provide a legal description of the project site, stating the location of the project (including county, nearest city, section number(s), township, range, base, and meridian). Include legal descriptions of beginning and ending points, and/or boundaries of the project, if available and applicable.

Mark as Attachment B-2

B-3 Project Summary

Include a brief (no more than 1/3 page) summary of your proposed project that includes the following:

- ✓ Applicant name and title of the project
- ✓ A brief description of project facilities, location(s), need for the project, goals, and objectives.

Mark as Attachment B-3

Part C

Engineering and Hydrogeologic Feasibility

The information requested in Sections C-1 through C-11 will be used by DWR to confirm that the proposed conjunctive water management facilities are feasible from a hydrogeologic and engineering standpoint. Provide references and supporting documentation for all information provided in Part C.

C-1 Certification Statements

Certification statements regarding project feasibility must be signed by a California registered geologist and signed and stamped by a California registered civil engineer working on this project. The statements are found in Figures C-1a and C-1b. Cite the references (such as feasibility studies, engineering design studies, hydrologic studies, and water rights permits or contracts) used to determine feasibility.

If the certification statements in Figures C-1a and C-1b are not completed, the application will not be eligible for funding and will not be funded.

Mark as Attachment C-1

Figure C-1a
Engineering Feasibility Certification

I, _____, a California registered civil engineer, have reviewed the information presented in support of this application. Based on this information, and any other knowledge I have regarding the proposed project, I find that it can be designed, constructed, and operated to accomplish the purpose for which it is planned. There is a sufficient water supply for the project. The information I have reviewed to document this statement is included (provide list, e.g., feasibility studies, engineering design studies, water rights permits, etc.).

(Original signature and stamp with expiration date)

Figure C-1b

Hydrogeologic Feasibility Certification

I, _____, a California registered geologist, have reviewed the information presented in support of this application. Based on this information and any other knowledge I have regarding the proposed project, I find that water intended for recharge will percolate and/or be injected into the aquifer(s) identified for recharge and can be recovered for later use. Based on data available for review, I also find that the water quality of the recharge water complies with all applicable regulatory standards related to aquifer(s) recharge. The information I have reviewed to document these statements are included (provide list, e.g., feasibility studies, geologic, geographical and/or hydrogeologic studies, etc.)

(Original signature and number with expiration date)

C-2 Water Source and Availability

Identify the source(s) of water to be used to recharge groundwater, and describe how and when the water source will be used during recharge, storage, extraction, and reuse. The applicant must attach documentation showing that the necessary water rights for use of the water proposed for recharge have been secured for the project. Water rights documentation should include a description of the type, duration, quantity, place of use, and date when water rights were obtained. If there are any questions concerning water rights, contact the State Water Resources Control Board, Division of Water Rights, at (916) 341-5300. Applicants should also consider seeking private legal counsel for water rights issues. If water is to be acquired through a purchase contract or other agreement, the contract period and terms of the contract must be clearly described and a copy of the agreement included in Attachment C-2. The water source cannot originate from extractions from a groundwater basin that would cause or worsen overdraft conditions.

Explain how downstream beneficial uses might be affected by using the proposed water source for groundwater recharge. Discuss local and downstream environmental demand for the water through known regulatory decisions, CALFED ROD, and any other past and pending legal decisions and challenges to the water.

Discuss all sources of water and the likelihood of their use for recharge in the proposed project. Calculate the volume of water available from each proposed source to the groundwater recharge project for each year during the life of the project. The life of the project is assumed to be 50 years unless otherwise indicated by the applicant. Hydrologic data from as early as possible to the most recent data available should be used to calculate the amount of water obtainable for the project. At a minimum, the hydrologic record for the most recent 50-year period must be used to calculate the water available to the groundwater recharge project. Cite the sources for all data. If data are not available, applicants should synthesize data for the most recent 50-year historical period using a technically acceptable synthesis technique. In your application, discuss the methods and assumptions used to synthesize data.

Describe the system for diverting and conveying water to the project, including the size, capacity, location, and construction details for all conveyance features. If water is to be conveyed to the project through a pipeline or canal used for another purpose, demonstrate that conveyance capacity exists for operation of the groundwater recharge facility as proposed in this application. Calculate and incorporate losses between the water source diversion and the groundwater recharge facilities such as conveyance losses and evaporation. Conveyance capacity should include information about the appropriate timing of water deliveries to ensure operation of the groundwater recharge facility as proposed in this application. Include a schematic diagram showing the site location; existing and proposed conveyance facilities; water supply sources such as reservoirs, groundwater basins, stream systems, and other sources; and their relative locations. Clearly distinguish between existing and new facilities.

Mark as Attachment C-2

C-3 Water Supply Yield and Reliability

Complete Tables C-1 through C-3 following the instructions below and those included on the specific table. Applicants should not modify the tables. If additional detail or information is needed to characterize the project, it should be provided in supporting tables. The information provided in the tables should correlate clearly with the project description as represented elsewhere in the application and with the water supply information in Section C-2.

If the project proposed for funding is part of a larger groundwater recharge project or program, describe and enumerate in the tables only how the project proposed in this application will improve water supply deliveries and reliability. Applicants are advised that only the project proposed for funding will be evaluated

and ranked. The project described should be consistent throughout the application, including, but not limited to, Sections A-4, B-1, C-3, C-11, and G. Include detailed documentation and a narrative discussion of data, assumptions, and methodologies used to complete the tables. Units should be in acre-feet.

Complete Table C-1 showing at least ten years (and more if available) of data on historical target deliveries (see definition in Appendix III) and actual deliveries for the agency's service area. Variations in the values in all columns are likely to occur due to hydrologic and institutional changes; as such, averages are generally not appropriate for these values. Supporting information should be provided to fully document the values provided in the table. When entering information in each table consider the following:

- ✓ Column B, Target Deliveries - Historic target deliveries for the applicant's service area. Target delivery is the volume of water needed to fulfill local (not exported) demand, i.e., the amount of water that would be delivered if available. This should include the full demand of the project area, not just that served by the applicant.
- ✓ Column C, Target Delivery Reduction through Conservation - Identify reductions in target deliveries accomplished through conservation measures. This value should only represent the amount of the reduction, not the reduced target delivery.
- ✓ Columns D through G, Supplies – identify actual deliveries met through local groundwater, local surface water, imported water, and reclaimed (or other) water. Supplies should include water delivered by the applicant, as well as groundwater extracted by others within the project area. Variations in the table are likely to occur due to hydrologic and institutional changes; as such, averages generally are not appropriate for these values.
- ✓ Column H, Unmet Target Deliveries – calculate the difference between supplies and target deliveries for each year. If shortages in the applicants supply are made up through groundwater pumping by water users, unmet target deliveries should be not shown. It is not necessary to show historic unmet target deliveries to demonstrate the need for the project. Future conditions will be identified in Tables C-2 and C-3.

Complete Tables C-2 and C-3 summarizing future conditions and expected improvements in water supply reliability or groundwater conditions if the project is implemented. Table C-2 represents the agency's projected water system performance without the proposed project. Table C-3 represents the agency's expected water system performance with the proposed project in place. Tables C-2 and C-3 must have the same values in Columns B, C, D, and E. The information required for this table is meant to serve as a consistent summary that can be compared across numerous project applications. Variations in the values in all columns are likely to occur due to hydrologic and institutional changes; as such, averages are generally not appropriate for these values.

Additional documentation for the data entered in each column must be provided to support the numbers entered. While the table requires annual data, in most cases the applicant should perform analyses using seasonal or monthly supply, target deliveries, and project operation assumptions to appropriately consider the impacts of variability inherent in conjunctive use operations. For most projects, the applicant will need to provide a narrative discussion for each column of the tables. Include a discussion of any assumptions made and reference the sources of data used in completing the tables.

Each column of the tables contains annual time series information for the life of the project (assumed to be 50 years unless established otherwise by the applicant). A period of record longer than the 50-year project lifespan may be used for these tables if it results in a more representative hydrologic pattern. When entering information in each table consider the following:

- ✓ Column B, Forecasted Local Target Deliveries – forecasted target water delivery volumes expected to occur within the applicant's service area over the life of the proposed project. Target delivery is the volume of water needed to fulfill forecasted local (not exported)

demand. This value should include all water delivered for water supply purposes, whether by the applicant or others, for use in the service area. The values used for Forecasted Local Target Deliveries must be the same in Tables C-2 and C-3.

- ✓ Column C, Forecasted Other Deliveries – Target deliveries beyond those identified in Column B, the forecasted other target deliveries may include deliveries to meet Bay-Delta Water Quality Standards, supply for transfer to the Environmental Water Account (as defined by CALFED Bay-Delta Program), or transfers to other users outside the project area. Be as specific as possible about the nature of these other target deliveries. Target Deliveries, for the purpose of computing changes in yield for this application, do not include water left in storage to compensate for groundwater overdraft. Expected changes to historic operations related to overdraft conditions can be addressed in Column E or N. The values used for Forecasted Other Deliveries must be the same in Tables C-2 and C-3.
- ✓ Column D, Total Target Deliveries – the total target deliveries is the volume the applicant is attempting to supply from its water management system, the sum of Columns B and C.
- ✓ Column E, Existing Water Supplies – the forecasted supplies that are currently available to the applicant, or otherwise used in the applicants service area, and expected to continue into the future over the life of the project. These forecasts should be consistent with the historical data shown in Table C-1, and should be supported by the information provided in Section C-2. In Table C-2, existing water supplies must be equal or greater than Total Water Management System Delivery in Column N.

When completing Tables C-2 and C-3, the Existing Water Supplies may reflect expected reductions in groundwater extraction that the applicant will implement to correct one or more negative conditions – such as overdraft, degradation in water quality, or subsidence, even if the project were not implemented. These expected reductions, and the certainty of their implementation, should be well documented. For example, if an adjudication or adopted groundwater management plan prescribes reductions in pumping relative to historic values, the reduced values should be used in Tables C-2 and C-3. The values used for Existing Water Supplies must be the same in Tables C-2 and C-3.

Columns F through M describe operation of the proposed project, and will be completed for Table C-3 only. The numbers entered here should be consistent with the information provided in Sections C-2, C-4, and C-5. The assumptions used to compute these numbers should be based on how the proposed recharge project will be integrated into the operation of the applicant's total water management system.

- ✓ Column F, Proposed Water Supplies – forecasted supplies the applicant plans to procure through water rights, contracts, etc. to use with the proposed recharge project. These supplies should be supported by the information supplied in Section C-2. Column F should include only the incremental amount of the new supply, not the total of existing and new supplies. The combination of excess existing supplies and proposed supplies must be sufficient to supply the recharge amounts entered in Columns G and H of Table C-3.
- ✓ Column G, Direct Recharge – water volumes expected to be recharged to the groundwater basin using active recharge methods, such as well injection and recharge basins. Surface water delivered for the purpose of direct recharge, included in Column G, should not be included in the Total Water Management System Delivery in Column N.
- ✓ Column H, In Lieu Recharge – water volumes expected to be recharged to the aquifer over the life of the project by supplying a substitute water source to historical groundwater users other than their typical groundwater supply. Surface water delivered for the purpose of in-lieu recharge, included in Column H, should not be included in the Total Water Management System Delivery in Column N.

- ✓ Column I, Total Recharge – total water expected to be stored in the groundwater basin by the project operation (sum of Columns G and H).
- ✓ Column J, Losses from Storage – water volumes expected to be lost (of the cumulative amount recharged) from the groundwater basin within the project area. These losses could occur due to forecasted basin outflow, rejected natural recharge, discharge to surface water, losses from the target aquifer, and other losses. The losses should be consistent with the information provided in Section C-4(7) of the application. Conveyance losses between the water surface and the recharge location should be reflected in the values in Columns G and H.
- ✓ Column K, Project Extraction – water volumes to be extracted from the proposed project, if applicable. The project extraction in any period must be within the physical extraction capability as described in Section C-5. Project extraction will become an element of the Total Water Management System Delivery in Column N, and should include extraction of recharged water by users other than the applicant within the project area. However, extraction is not a required component of a groundwater recharge project if the primary objective is to alleviate overdraft.
- ✓ Column L, Net Recharge – changes to the available water in storage as a result of operation of the project for that time period. This value is computed as the difference between total recharge and water extracted or lost during the period (Column I minus Column J minus Column K) and can be positive or negative.
- ✓ Column M, Water in Storage – a cumulative volume of water in storage as a result of project operation over the life of the project. This column is computed by adding the Net Recharge (Column L) in the current period to the Water In Storage (Column M) from the previous period. A groundwater recharge project must always maintain water in storage that is equal or greater than zero.
- ✓ Column N, Total Water Management System Delivery – actual water to be delivered from the applicant's entire water management system, including any independent groundwater extraction from within the applicant's service area. This number is limited by supply and by the capacity of system characteristics, such as conveyance, storage, extraction capability, operational requirements, etc. The method used to compute deliveries must be clearly documented. The values in column N may differ between Table C-2 and C-3, reflecting project operation.
- ✓ Column O, Unmet Target Deliveries – expected differences between the total target deliveries (Column D) and actual water management system deliveries (Column N) made from the entire water management system. Column O cannot be less than zero. Unmet target deliveries in Table C-2 may provide a basis for the need for the project. If shortages in the applicants supply are expected to be made up through groundwater pumping by others within the project area, unmet target deliveries should be reduced to reflect that extraction.
- ✓ Column P, Change in Delivery – Only valid for the "With Proposed Project", Table C-3. This represents the increased yield of the applicant's water management system with the proposed project in place. Calculate by subtracting the Without Project Total Water Management System Deliveries (Column N from Table C-2) from the With Project Total Water Management System Deliveries (Column N from Table C-3). The average change in delivery over the 50-year duration (or project yield) is used in the economic analysis in Part G. Groundwater recharge projects are not required to produce yield. The project benefit and economic justification may be demonstrated through the volume of water added to storage.

Mark as Attachment C-3

C-4 Soil and Aquifer Parameters

Identify and describe the physical characteristics of the groundwater basin in which the project will be located. Document the sources of all information, and any assumptions made.

1. Show the areal extent of the groundwater basin or subbasin on a map of appropriate scale, and show the depth of the basin and location of the aquifer(s). Provide as many cross sections as necessary to adequately demonstrate the geometry of the aquifer(s). Cross sections must include stratigraphy based upon boreholes, trenches, monitoring wells, or other supporting information. Describe the hydraulic conditions of the target aquifer(s) (i.e., confined, unconfined, or semi-confined).
2. Describe the geology of the aquifer including the lithology, stratigraphy, and structure. Supporting documentation may include, but is not limited to, sample collection and laboratory analysis (particle size distribution) of the target aquifer materials, surface and borehole geophysical methods and/or logs, geologic mud logs, and/or driller's logs.
3. On a map, show where the water recharged by this facility will be stored and locate significant wells for monitoring, extraction, and injection.
4. Provide at least semi-annual water levels referenced to mean sea level for the past 50 years or as data availability allows for representative areas of the basin including the project location. Use hydrographs, contour maps, and other descriptive materials that demonstrate groundwater level conditions and trends.
5. Provide the storage coefficients of the aquifer(s) and the volume of storage space available.
6. Provide values for transmissivity and hydraulic conductivity in the aquifer(s).
7. Using the information developed in this section, show that the facility can recharge the volume of water available and planned (the amount described in Sections C-2 and C-3). Include an estimation of the volume of recharged water that will be available for recovery. Identify loss rates to basin outflow, rejected natural recharge, rejected recharge of applied water, discharge to surface water, losses from the target aquifer, and other losses. Identify the source and timing of any additional internal recharge induced by pumping. Estimate the effect of recharge on water levels in the aquifer.
8. Discuss whether there are multiple aquifers in the basin, and demonstrate that the proposed groundwater recharge facility will recharge the targeted aquifer.
9. Determine if the groundwater recharge project will have an effect on aquifers in adjacent basins or sub-basins, and if so, explain how the effects will be mitigated in Section E-3.
10. Provide the equilibrium infiltration rate of direct groundwater recharge for any proposed settling basins or injection wells. Consider recharge basin factors such as reduction of infiltration rates, chemical precipitation of solids, growth of algae, and bacterial biomass. Discuss how these effects will be prevented or mitigated.

Mark as Attachment C-4

C-5 Extraction Capability

If the operational analysis in Section C-3 indicates that extraction will occur, the applicant must demonstrate the existence of a system to recover stored water, proposed project facilities for extraction, or an agreement with a local agency or other entity for the installation of that system. Describe the system that will be used to recover and convey the stored water as identified in Table C-3. Indicate existing or proposed recovery facilities. Explain how any proposed facilities will be constructed in a timely manner. The description should include detailed information on the following:

1. Identify the number and location of extraction wells and provide construction details.

2. Provide the volume of groundwater currently extracted and consumed annually by all users within the applicant's service area, or the area of the proposed project.
3. Quantify and discuss typical well yields in the subject groundwater basin and aquifer.
4. Provide proposed operating parameters for the extraction wells, including average and maximum pumping rates and pumping schedule.
5. Describe the system for conveying and/or distributing the extracted water, including the size, capacity, location, and construction details for all conveyance/distribution features. If water is to be conveyed through a pipeline or canal used for another purpose, demonstrate that conveyance capacity exists for operation of the groundwater storage facility as proposed in this application.

Mark as Attachment C-5

C-6 Water Quality

Determine the potential water quality impacts/benefits that will result from operation of the proposed groundwater recharge project over the 50-year life of the project. Determine the project's impacts on water quality in the aquifer.

Document the baseline water quality conditions, including time series plots and other pertinent water quality data. Provide information regarding current and past water quality problems that have occurred within the groundwater basin, including a current status and description of mitigation methods and their performance. If contaminants are or have been present in the aquifer, describe contaminant concerns (MTBE, pesticides, VOCs, nitrates, arsenic, etc.). Provide cross sections and concentration contour maps showing the lateral and vertical extent of groundwater contaminants and their relation to the proposed targeted aquifer(s) for storage. Attach contaminant concentration time series plots for wells with pertinent water quality parameters that are representative of water quality trends, and discuss the trends shown by these records. If treatment of the groundwater is required after extraction, describe how treatment will be performed.

For projects utilizing direct recharge discuss the impacts that are expected to occur to existing water quality in the target aquifer(s) due to the proposed groundwater storage project. Discuss water quality changes in the aquifer that would occur due to the use of the designated recharge water. If the recharged water would adversely impact the quality of the groundwater, discuss mitigation measures that will be taken. Demonstrate that the appropriate State and local agencies have or would approve the proposed water for recharge into the target groundwater aquifer(s). Provide chemical and/or pathogen analytical results of the proposed recharge water and the existing groundwater with respect to all regulated parameters for its intended use. If treatment of the source water is required before recharge, describe how treatment will be performed. Discuss whether the targeted aquifer meets water quality standards for existing or potential beneficial uses, and how the proposed project will affect existing and potential beneficial uses of the aquifer relative to these standards.

For projects utilizing in-lieu recharge methods, discuss the ambient water quality conditions in the aquifer being recharged and any significant changes in water quality that can be anticipated by changes in groundwater movement resulting from recharge. If adverse changes in water quality are anticipated, discuss the mitigation measures that will be taken. Demonstrate that the anticipated source of substitute supply is of a quality suitable for maintaining the beneficial uses that are supported by the existing groundwater supply. Discuss whether the targeted aquifer meets water quality standards for existing and potential beneficial uses, and how the proposed project will affect existing and potential beneficial uses of the aquifer relative to these standards.

Discuss any mitigation measures that will need to be taken to assure that aquifer water quality does not degrade over the life of the project. Use water quality analyses of the source water and intended aquifer to document your discussion.

Mark as Attachment C-6

C-7 Overdraft, Saline Water Intrusion, and Other Concerns

For the purpose of this application, the information applicants provide in Sections C-7a to C-7c will be used to evaluate the likely effect the proposed groundwater recharge facility will have on overdraft conditions, saline water intrusion, and other concerns. Provide historic data as well as projections. Discuss the basis of projected effects of the project. Please respond to all items in C-7a through C-7c even if no negative impacts or benefits are expected from the project.

C-7a Overdraft Reduction

Determine the effects on overdraft that will result from operation of the proposed groundwater recharge project over the 50-year life of the project. Describe problems in the target groundwater basin that are a result of overdraft. Describe how the proposed facility will help mitigate or may exacerbate those problems.

Provide groundwater level maps showing how groundwater levels in the basin have changed over time. Discuss the changes that will occur from the operation of the proposed project. If maps are not available, attach time series plots (hydrographs) of wells that are representative of water level trends. Discuss the trends shown by these records.

Mark as Attachment C-7a

C-7b Saline Concentration Trends

Determine the saline water concentration trends that will result from operation of the proposed groundwater recharge facility over the 50-year life of the project. Describe problems in the target groundwater basin that are a result of saline water intrusion. Describe how the proposed facility will help mitigate or may exacerbate those problems. Provide information showing changes in saline concentrations over time using contour maps and/or time series plots (hydrographs) using data from wells that are representative of saline concentration trends within the groundwater basin. Discuss the trends shown by these records.

Mark as Attachment C-7b

C-7c Other Concerns

Address other issues associated with groundwater extraction and recharge such as locations of subsidence, known cones of depression, mounding patterns, flooding or inundation, and areas where reductions in water levels (drainage) are desirable. If the target groundwater basin is located in part or entirely within an area indicated as having the potential for liquefaction, landslides, or other ground failure during a seismic event, discuss the effects these concerns might have on the conjunctive water management facilities. Consider past problems, design concerns associated with the proposed project, and future problems that could be caused by the proposed project.

Mark as Attachment C-7c

C-8 Project Reports and Previous Studies

Provide a copy of all reports and studies prepared for the proposed groundwater recharge facilities that form the basis for or include information pertaining to this application. Provide a brief summary of the types of information in each reference. If a feasibility study has not been completed for the project, explain what has been done to determine the project's feasibility.

Mark as Attachment C-8

C-9 Project Plans and Specifications

As the Groundwater Recharge Program is a construction loan program, the intent is to award loans to projects that are nearing construction. Accordingly, provide a copy of the most complete plans and specifications available for the project. Project plans should indicate type of construction, types and quantities of materials, dimensions, cross-sectional drawings, profile drawings, location, elevation (if available), planned monitoring and mitigation measures (if required), and other appropriate features. The preliminary plans need to be at least a 30 percent design drawing. This will be evaluated based on the cost estimate provided in Section C-11. Project specifications must include citations of all standards used, applicable health and safety specifications (such as OSHA standards), and applicable building codes (such as Uniform Building Codes). Monitoring wells and other monitoring systems are considered an integral part of a conjunctive water management project, and should be represented in the plans and specifications.

Each final plan sheet must be prepared, signed, and stamped by a California registered civil, mechanical, electrical, or structural engineer, as appropriate. Any architectural drawings must be stamped by a California Licensed Architect.

Mark as Attachment C-9

C-10 Construction Inspection plan

Provide a detailed construction inspection plan describing who will inspect the site and project before, during, and after construction; the types and frequency of inspections and tests; and the documentation requirements, for example, the daily inspection reports to be performed; QA/QC Plan; and the Health and Safety Plan.

Mark as Attachment C-10

C-11 Project Work Plan, Budget, and Schedule

Provide a work plan that includes a description of work items to be performed under each task of the proposed project; project deliverables for assessing progress and accomplishments, including periodic progress reports; and electronic data deliverables to be submitted to DWR upon completion of project;

Include in the work plan a discussion of the monitoring system to be used to verify project performance with respect to yield or other project objectives identified in this application. Include at least ten years of monitoring, including the monitoring of diversions, recharge, extraction, and any other indicators that would help document project performance. Note that monitoring costs should be included as a part of O & M costs in Sections A-14 and Table G-3.

Provide a detailed cost estimate commensurate with the design stage that is being submitted. The estimate should include the quantity of materials used, unit cost, number of units, and should have separate costs for labor, equipment, and materials. For any design work yet to be done, include a cost estimate for that work, broken down by number of hours by discipline, unit cost and total cost. Include any contingency amounts in your estimate, and provide an explanation for the rationale used to determine the contingency percentage used in the estimate. This contingency percentage must agree with the contingency percentage used in Sections A-3 and Table G-2. Costs for mitigation of environmental impacts must be included in the estimate. The detailed cost estimate should correspond to the summary estimate provided in Section A-3. Applicants should consider the applicability of prevailing wage laws in developing the estimate of project costs.

Provide a discussion of replacement periods and costs of project components over the project lifespan. The replacement cost information will be quantified in the economic analysis of Part G.

Provide a schedule showing the sequence and timing of tasks, including the expected project completion date. The schedule should show the start and end dates and project milestones. The schedule should be in a horizontal bar or Gantt chart format. Tasks may overlap. Show any dependence or predecessors by showing links between tasks. For scheduling purposes, assume that a contract between DWR and your agency would be executed on June 1, 2004. At a minimum, the following tasks should be included on the schedule:

- ✓ Development of financing;
- ✓ Development of environmental documentation;
- ✓ Project design and bid solicitation process;
- ✓ Acquisition of rights of way, if required;
- ✓ Acquisition of all necessary permits;
- ✓ Construction start and end dates with significant milestones included;
- ✓ Implementation of any environmental mitigation or enhancement efforts; and
- ✓ Project performance monitoring for a period of at least ten years.

Mark as Attachment C-11

Table C-1
Historical Target Deliveries and Actual Deliveries for the Agency's Service Area

A	B	C	D	E	F	G	H
Year	Target Deliveries	Target Delivery Reduction Through Conservation	Supplies				Unmet Target Deliveries
			Local Ground water	Local Surface Water	Imported Water	Reclaimed or Other Water	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
Average							

¹ Use additional sheets if more than 10 years of historical data is available.

Table C-2
Agency's Water System Performance without the Proposed Project

Year	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	Forecasted Deliveries				Water Supplies		Proposed Banking Project							Total Water Management System Delivery	Unmet Target Deliveries	Change in Deliveries
	Local Target Deliveries	Other Deliveries	Total	Existing	Proposed	Direct Recharge	In Lieu Recharge	Total Recharge	Losses from Storage	Project Extraction	Net Recharge	Water in Storage				
				=B+C					=G+H			=I-J-K		1	=D-N	
1						NA	NA	NA	NA	NA	NA	NA	NA			NA
2																
3																
4																
5																
6																
7																
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¹ To be computed using a method that represents how system will be operated by applicant.

Table C-2
Agency's Water System Performance without the Proposed Project

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Forecasted Deliveries				Water Supplies				Proposed Banking Project							
Year	Local Target Deliveries	Other Deliveries	Total	Existing	Proposed	Direct Recharge	In Lieu Recharge	Total Recharge	Losses from Storage	Project Extraction	Net Recharge	Water in Storage	Total Water Management System Delivery	Unmet Target Deliveries	Change in Deliveries
			=B+C		NA	NA	NA	=G+H	NA	NA	=I-J-K	NA		=D-N	
26															NA
27															
28															
29															
30															
31															
32															
33															
34															
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41															
42															
43															
44															
45															
46															
47															
48															
49															
50															
Avg.															

Table C-3
Agency's Water System Performance with the Proposed Project

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Forecasted Deliveries				Water Supplies				Proposed Banking Project							
Year	Local Target Deliveries	Other Deliveries	Total	Existing	Proposed	Direct Recharge	In Lieu Recharge	Total Recharge	Losses from Storage	Project Extraction	Net Recharge	Water in Storage	Total Water Management System Delivery	Unmet Target Deliveries	Change in Deliveries
			=B+C					=G+H			=I-J-K		1	=D-N	
1															
2															
3															
4															
5															
6															
7															
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23															
24															
25															

¹ To be computed using a method that represents how system will be operated by applicant.

Table C-3
Agency's Water System Performance with the Proposed Project

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Year	Forecasted Deliveries			Water Supplies		Proposed Banking Project							Total Water Management System Delivery	Unmet Target Deliveries	Change in Deliveries
	Local Target Deliveries	Other Deliveries	Total	Existing	Proposed	Direct Recharge	In Lieu Recharge	Total Recharge	Losses from Storage	Project Extraction	Net Recharge	Water in Storage			
			=B+C					=G+H			=I+J-K		1	=D-N	
26															
27															
28															
29															
30															
31															
32															
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41															
42															
43															
44															
45															
46															
47															
48															
49															
50															
Avg.															2

¹ To be computed using a method that represents how system will be operated by applicant.

² Yield

Part D

Plan for Completion of Environmental Documentation and Permitting Requirements

Environmental issues are often complex and may require considerable time and expense to resolve adequately. Although DWR will evaluate, rank, and select projects for funding prior to completion of appropriate environmental documentation, all such documentation must be completed before DWR will enter into funding contracts for selected projects or disburse any loan funds.

The application must demonstrate completion of, or provide a plan for completion of, all applicable environmental documentation. The plan should address all the potential environmental, social, and economic impacts of the proposed project required under the California Environmental Quality Act (CEQA) and, if applicable, the National Environmental Policy Act (NEPA). The plan should also address compliance with local, county, State, and federal permitting.

D-1 CEQA and NEPA

For complete information on the CEQA process, applicants may request a copy of the California State Clearinghouse Handbook by calling (916) 445-0613 or by submitting a written request to:

The State of California
Governor's Office
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Applicants who have completed their CEQA/NEPA documentation must provide DWR with copies of the appropriate final documentation, including the Notice of Determination.

Applicants in the process of preparing their CEQA/NEPA documentation must submit to DWR a statement describing the current status of that documentation and provide a description of the documentation that has been completed. The applicant must also submit to DWR a detailed plan, including a schedule, for compliance with all applicable environmental laws.

A CEQA Environmental Checklist form that may be useful to the applicant in developing the plan for compliance is available from the following CEQA web site:

http://ceres.ca.gov/topic/env LAW/ceqa/guidelines/Appendix_G.html

Mark as Attachment D-1

D-2 Permits, Easements, Licenses, Acquisitions, and Certifications

List all required permits, easement rights, licenses, land acquisitions, and certifications of approval of federal, State, and local agencies that may be required for the proposed project. If the proposed project will require Section 404 permits or streambed alteration permits address this in the plan for CEQA/NEPA compliance. Identify whether the applicant will require access across public or private property that the applicant does not own to accomplish the proposed project.

If the proposed project will involve or impact a reservoir or dam of any dimension, the applicant will be required to obtain a DWR Safety of Dams Certificate of Approval or a Statement of Exemption. If you have questions on dam safety, call DWR's Division of Safety of Dams at (916) 445-7606.

Submit a plan and schedule for obtaining permits required for the proposed project. This schedule must be reflected in the Project Schedule shown on Attachment C-11.

Mark as Attachment D-2

D-3 Local Land Use Plans

Provide a listing of all relevant local land use or general plans and a description of how the proposed project fits within those plans. Identify the acreage of land to be acquired, current land use and zoning, and current general plan designation. Identify the acreage subject to a land use change under the proposed project; list the current and proposed land use, zoning and general plan designations of the area; and acreage subject to a land use change.

Mark as Attachment D-3

D-4 Federal, State, and Local Statutes and Regulations

Provide a list of all other federal, State, and local laws, statutes, regulations and ordinances governing the proposed project, including any applicable local surface water and groundwater ordinances. Provide evidence of compliance or a plan for compliance with applicable laws.

Mark as Attachment D-4

Part E

Adequacy of Protection Measures

DWR is required to make a determination for each selected project that other users of the same or a hydrologically related aquifer will not suffer harm, as provided in California Water Code Section 79181.

The applicant must demonstrate that adequate measures are in place to protect local landowners and others, from potential impacts associated with groundwater recharge projects. The information in Sections E-1 through E-3 will be used to evaluate these protection measures.

E-1 Protection and Preservation of Water Rights

Describe the potential impacts the project may have on the water rights of landowners and other water users. This description should include documentation that the project will be designed and operated in a manner that ensures other water users, within the same or a hydrogeologically related aquifer, will not suffer any unreasonable diminution of the quantity or quality of their groundwater supplies or incur additional uncompensated expense as a result of the implementation of the project.

Mark as Attachment E-1

E-2 Groundwater Monitoring and Mitigation

Provide a detailed description of the proposed groundwater monitoring program, including the number, locations, and construction details for all groundwater monitoring wells and any other monitoring measures that are part of the proposed project. Monitoring wells and a groundwater monitoring system are considered an integral part of a groundwater recharge project and must be incorporated in the plans and specifications requested in Section C-9. Include descriptions regarding the frequency of monitoring, the parameters to be monitored, and the data management system that will be used to organize the data collected. Also, provide a detailed mitigation plan that will be implemented to address potential impacts to groundwater levels and groundwater quality caused by project operations. The monitoring and mitigation plan must continue for the life of the project.

Mark as Attachment E-2

E-3 Extraction Limitation

Provide documentation that project operations will limit extraction of groundwater to no more than the amount of water that is stored or recharged by the project participants.

Mark as Attachment E-3

Part F

Part G

Economic Justification

This section requires enumeration of the costs of construction and operation of the project, as well as the economic benefits derived from the additional water supply that accrue to those parties directly involved in the project, including purchasers of market supplies developed by the project. Use Tables G-1 through G-6 to provide this information in addition to the information in the tables, provide a narrative discussion of the costs and benefits of the project that describes and supports the values entered in the tables.

If the project proposed for funding in this application is to be phased, or is a part of a larger conjunctive water management program, the economic analysis must be completed for a stand-alone phase of the project. The project described should be consistent throughout the application, including, but not limited to, Sections A-4, B-1, C-3, and G. Water supply yield from the project should be equal to the annual average of column P in Table C-3.

Table G-1 summarizes the project's performance; Tables G-2 through G-4 summarize the project's capital and O&M costs; Table G-5 computes the project's water supply benefits using three possible methods, as well as the pumping lift benefits of the proposed project; Table G-6 computes the cost-benefit ratio for the proposed project. The cost-benefit ratio will be one of the bases of the score on criterion H-5.

The tables are used to compute total discounted values for both benefits and costs. It is important to note that the distribution of costs and water supply benefits over the life of the project can vary from project to project, and this distribution can affect the total discounted value. The use of Tables G-1 to G-5 to compute average annual values is appropriate only when benefits begin at or soon after project completion and are fairly uniform over the life of the project, and all costs are either initial capital costs, every-year O&M costs, or occasional replacement costs. If this is the case, the tables provide a reasonable estimate of the total discounted values. However, if benefits and/or costs are not uniform over the life of the project, the use of the average annual procedure may underestimate or overestimate the total discounted values. For example, water supply benefits from Table C-3 may not accrue until after some years have passed (for example, until storage has accumulated). In this case, applicants may choose to discount benefits and/or costs on a year-by-year basis. If annual discounting is appropriate, and the applicant chooses to conduct a year-by-year analysis, please contact Lorraine Marsh at (916) 653-6414 or lmars@water.ca.gov to discuss the alternative approach.

In any case, applicants should take care to provide realistic and supportable cost and benefits analyses. The economic value of water produced (project yield) should be based on realistic values for the year types in which the water is provided.

Analysis Assumptions

Applicants must use the following assumptions in determining the benefits and costs for the proposed project:

Period of analysis

The economic evaluation will be based on a 50-year analysis period, unless otherwise specified by the applicant. Applicants may provide justification for a shorter or longer project lifespan.

Discount rate

Because benefits and costs are evaluated over a 50-year period, they must be discounted to reflect the value of money over time (a dollar received today is worth more than one received in the future). All applicants must use a 6 percent discount rate.

Inflation and escalation

For ease of analysis, applicants will assume zero future inflation and escalation of costs.

Dollar value base year

All benefits and costs will be expressed in current year dollars (2002). Inflation in prior years must be taken into account. If dollar estimates are only available for prior years, Table G can be used to update these costs to year 2002 estimated price levels using the Implicit Gross Domestic Product Price Deflator (IPD.) Table G shows IPD for the years 1980 through 2002. As an example, using the update factor of 1.29 obtained from the table below, \$1,000 reported in 1990 dollars would be equivalent to \$1,290 in year 2002 dollars. If you need to update from years preceding 1980 or to years following 2002, please contact Lorraine Marsh at (916) 653-6414 to obtain the needed update factors.

Table G
IPD and Update Factors

Year	IPD	Factor
1980	55.1	2.00
1981	60.7	1.82
1982	65	1.69
1983	68	1.62
1984	70.6	1.56
1985	73	1.51
1986	74.7	1.47
1987	76.7	1.44
1988	79	1.39
1989	82.2	1.34
1990	85.2	1.29
1991	88.8	1.24
1992	91.2	1.21
1993	93.3	1.18
1994	95.3	1.16
1995	97.5	1.13
1996	99.4	1.11
1997	101.3	1.09
1998	102.6	1.07
1999	104.1	1.06
2000	106.1	1.04
2001	108.7	1.01
2002	110.1	1.00

Multiple-funded projects

The economic analysis will be conducted for the entire project proposed in the application, regardless of funding sources. All project costs (capital and O&M) must be included in the economic analysis, even if the requested loan only funds part of the project.

Instructions for completing Tables G-1 through G-6 follow.

G-1 Project Performance

Table G-1 shows the expected average annual increased deliveries from the water supply system (yield), and the average annual water in storage as a result of project operations. These values should be directly transferred from Table C-3, Column P (average value) and Table C-3, Column L (net recharge value).

G-2, G-3, and G-4 Project Costs

Project costs usually include capital (construction), annual O&M costs, and capital replacement costs. All costs must be included and clearly documented to allow a reviewer to assess the accuracy and reasonableness of the analysis. Replacement costs of capital facilities that do not last 50 years are included in the capital cost category. Capital costs should correspond to the information provided in Sections A-3 and C-11. O&M costs should correspond to the information in Section A-14. Although some project costs are not fundable under this program, all costs required to achieve project benefits must be included in the economic evaluation.

Table G-2 shows the capital costs required to plan and construct the project. Although capital costs may be spread over more than one year, Table G-2 assumes that all capital costs are incurred in one year. Replacement costs that will be paid farther in the future should be discounted to the present. In Table G-2, enter costs for the following categories in column (b), and replacement costs for the same categories in column (c).

- ✓ Land Purchase/Easement;
- ✓ Planning/Design/Engineering;
- ✓ Materials/Installation;
- ✓ Structures;
- ✓ Equipment Purchases/ Rentals;
- ✓ Environmental Mitigation/Enhancement;
- ✓ Construction/Administration/Overhead;
- ✓ Project/Legal/License Fees; and
- ✓ Other.

To determine discounted replacement cost, divide future cost by 1.06^Y where Y is the number of years into the future that the replacement cost will occur. Note that the entries of column (b) should correspond to the cost information in Sections A-3 and C-11.

Table G-2 includes a contingency cost to be computed in column (e) for each of the above categories. The contingency percentage used here must agree with the contingency percentage used in Sections A-3 and C-11. Capital and replacement costs and associated contingency costs are added together in column (f), which is totaled at the bottom of the table.

NOTE: Table G-2 excludes financial costs, such as interest costs during construction and long-term debt service costs.

Table G-3 summarizes annual O & M costs incurred once the project begins operation. These costs are only the O&M associated with the new facilities or operations, and should agree with the costs presented in Section A-14. These may include administration, column (a); operations, column (b); maintenance, column (c); water purchases, column (d); extraction costs, whether incurred by the local agency or other water users, column (e); and "other" costs, column (f). Column (g) computes total annual O&M costs, which is then multiplied by the factor 15.7 to obtain total discounted O&M costs over the 50 year analysis period, column (h).

Table G-4 computes the total discounted costs of the project over the analysis period by combining capital and replacement costs, column (a); with the total discounted O&M costs, column (b); and placing the sum into column (c).

G-5 Project Benefits

The primary benefits associated with groundwater storage projects are water supply benefits and reduced pumping lift. Water supply benefits occur when recharged supplies are extracted and put to beneficial use. Lift benefits occur while the water is stored in the aquifer. Water supply benefits are computed in Tables G-5a through G-5d. The value of the project's water supply is determined by how the water will be used. If the applicant has adequate water supplies for the foreseeable future, then the water delivered by the project will allow that agency to reduce the amount of water purchased, diverted, or pumped from its most expensive current water supply source. However, if the applicant needs to augment water supplies to meet future demands, then the value to the water agency is measured by the least-cost alternative that may be eliminated or delayed because of the project. If the applicant would experience a future water shortage without the project, then the cost of shortage avoided is the benefit of the project. Finally, if the applicant plans to sell all or part of the project water to existing customers, new customers, or other agencies, then the unit value of the project water can be measured by the expected price for which it is sold, thus generating revenue.

From these three types of water supply benefits, the applicant will need to determine which one or combination is most appropriate for the proposed project. Although, Tables G-5a, G-5b, and G-5c allow the applicant to compute three types of water supply benefits that might result from the project, the applicant must avoid double counting any water supply benefits, such as showing sales revenue and avoided cost benefits for the same water in the same year. Each acre-foot of water can only have one type of benefit in a given year. It is possible, however, for portions of the project yield to provide different benefit types. For example, some water could be sold to another agency and some used to avoid the costs of another water supply. If more than one water supply benefit table (G-5a, G-5b, and G-5c) is used, the sum of the acre-feet of water supply [Table G-5a column (c) plus Table G-5b column (I) plus Table G-5c column (b)] should equal the project average annual yield from Table G-1.

Table G-5a—for applicants with current water supplies that will be displaced by the proposed project, Table G-5a is completed by showing the current major sources of supply available to the agency, column (a), along with the cost/acre-foot of obtaining water from these sources, column (b). The amount of supply from each source that will be displaced by the proposed project is entered in column (c). Column (d) is the product of column (b) and column (c). The sum of the column (d) entries is entered in the "Total" row of the Table.

Table G-5b—for applicants needing to augment current supplies, Table G-5b is completed to identify the alternative(s) that will be delayed or eliminated as a result of the project. The applicant should document that it would actually implement the alternative project if the proposed project were not available. Documentation should be in the form of a reference to planning documents, such as feasibility studies, or any written history showing that the alternative project was considered to be a reasonable water supply option,

and costs were determined. Such documentation will be used to evaluate the reasonableness of the avoided costs of future water supply alternatives used in Table G-5b.

In Table G-5b, each row corresponds to a water supply alternative that will not be needed, completely or partly, because of the proposed project. Alternative projects should be entered in order from least to most expensive per unit of water. The name of the alternative(s) is entered into column (a), and its associated capital costs are entered into column (b). Column (b) is multiplied by the capital recovery factor in column (c) to obtain annual capital costs, column (d), to which are added annual O&M costs, column (e), to obtain total annual costs, column (f). Dividing the total annual costs by the total annual supply in column (g) results in the cost/acre-foot for the alternative in column (h). The amount of supply augmentation that will be displaced by the proposed project is entered in column (i), for each replaced alternative, beginning with the least cost alternative. Column (j) is the product of column (h) and column (i). The sum of the column (j) entries is entered in the “Total” row of the Table.

An applicant should compare the amount and timing of water supply from the proposed project and the avoided alternative(s). If an alternative provides a larger water supply than the proposed project, the applicant must make suitable adjustments to the alternative to be similar to the proposed project, i.e., only a share of the cost of the alternative can be claimed as a measure of benefit. If the alternative provides a smaller amount of water supply than the proposed project in some years, then an additional benefit may be claimed based on the additional water supply provided by the proposed project. If the alternative provides water supply at different times (year-types or season) than the proposed project, then additional adjustments may be needed, or the alternative may simply not be a reasonable alternative to the proposed project.

Water shortage may be a reasonable alternative to all or part of the proposed project yield in some years. In this case, avoided water shortage costs may be claimed as an economic benefit. The applicant must avoid counting both water supply benefits and avoided costs of shortages for the same volume of water in a given year. Applicants must clearly document any avoided water shortage costs claimed. Legitimate shortage costs include lost net revenues from crop production caused by land idling, costs of extraordinary conservation measures, consumer costs, and costs of replacing damaged permanent crops, perennials, or landscaping. Avoided costs of shortages should be clearly documented, and an average annual value entered in Table G-5d, row (d). For assistance in documenting avoided costs of shortages, contact Lorraine Marsh at (916) 653-6414.

Table G-5c—finally, if the applicant plans on selling all or part of the additional water supply, Table G-5c is used. Column (a) lists the parties that may potentially buy project supplies, column (b) lists the amount of water to be sold to each (on an annual average basis), and column (c) shows the projected selling price. The expected sales revenue, the product of column (b) and column (c) is entered in column (d). Other costs to the applicant associated with providing the water to the buyer (such as treatment, conveyance, and administrative costs) must be subtracted from the selling price claimed as the benefit. Increased water supply revenues during shortage as a result of the project can be counted as a benefit in Table G-5c (on an annual average basis).

An option fee is sometimes paid by a contracting agency to a selling agency to maintain the right of the contracting agency to buy water whenever needed. Although the water may not be purchased every year, the fee is usually paid every year. Any option fees, which are entered in column (e), are added to column (d) and the sum is entered in column (f). The sum of the column (f) entries is entered in the “Total” row of the Table.

Table G-5d computes the lift benefits of the project, allowing the applicant to take credit for the reduced cost of pumping by recharging a basin. The average annual additional water in storage as a result of the recharge project (row a), project area (row b), and storage coefficient of the target aquifer (row c) are used to determine the change in groundwater depth (row d). The unit pumping cost per foot of lift (row e) is multiplied by the total volume pumped (row f) and the change in depth (row d) to determine the annual lift benefit (row g).

Table G-5e computes the total discounted direct benefits to local project beneficiaries for the purpose of economic justification. It combines Tables G-5a, G-5b, and G-5c, as well as avoided costs of water shortages.

G-6 Benefit/Cost Ratio

Table G-6 computes the benefit/cost (B/C) ratio from information developed in Tables G-1 through G-5e. Total discounted water supply benefits are entered in row (a). These benefits are transferred from Table G-5e. Total discounted project costs, from Table G-4, are entered in row (b). Dividing the project's total discounted benefits by its total discounted costs results in the B/C ratio in row (c). This B/C ratio is the basis of the ranking in criterion H-7.

Table G-1
Project Performance

(a)	Average Annual Increase in Delivery (AF)	1
(b)	Average Annual water in storage (AF)	2

¹ Row (a) is the average annual change in delivery from Column P of Table C-3.

² Row (b) is the average annual water in storage from Column M of Table C-3.

Table G-2
Capital Costs

	Capital Cost Category (a)	Cost (b) ³	Replacement Costs (discounted)	Contingency Costs		Subtotal (f) (b + c + e)
			(c) ⁴	Percent (d)	Dollars (e) ((b + c) x d)	
(a)	Land Purchase/Easement					
(b)	Planning/Design/Engineering					
(c)	Materials/Installation					
(d)	Structures					
(e)	Equipment Purchases/Rentals					
(f)	Environmental Mitigation/Enhancement					
(g)	Construction Administration/Overhead					
(h)	Project Legal/License Fees					
(i)	Other					
(j)	Total (a + ... + i)					

³ Column (b) entries must match project budget in Sections A-3 and C-11.

⁴ Divide any future replacement cost by 1.06^Y where Y is the number of years into the future that the replacement cost will occur.

Table G-3
Annual Operations and Maintenance Costs

Annual Administration (a)	Annual Operations (b)	Annual Maintenance (c)	Annual Water Purchases (d)	Annual Extractions ¹ (e)	Annual Other (f)	Total Annual O&M Costs (g) (a+...+f)	Total Discounted O&M Costs ² (h) (g x 15.7)

¹ Agency and/or other user costs to withdraw water from groundwater basin.

² Total value of O&M costs over a 50-year period with discount rate of 6 percent.

Table G-4
Total Cost Summary

Capital and replacement Costs ³ (a)	Discounted O&M Costs ⁴ (b)	Total Discounted Project Costs (c) (a + b)

³ From Table G-2, column (f) row (j).

⁴ From Table G-3, column (h).

Table G-5
Water Supply Benefits

Table G-5a
Avoided Costs of Current Supply Sources

Supply Sources (a)	Cost of Water (\$/AF) (b)	Annual Displaced Supply (AF) (c)	Annual Avoided Costs (\$) (d) (b x c)
Totals			

Table G-5b
Avoided Costs of Future Supply Sources

Future Supply Sources (a)	Total Capital Costs (\$) (b)	Capital Recovery Factor ¹ (c)	Annual Capital Costs (\$) (d) (b x c)	Annual O & M Costs (\$) (e)	Total Annual Costs (\$) (f) (d + e)	Annual Supply (AF) (g)	Annual Costs (\$/AF) (h) (f / g)	Annual Displaced Supply(AF) (i)	Annual Avoided Costs (\$) (j) (h x i)
		0.0634							
		0.0634							
		0.0634							
		0.0634							
		0.0634							
Total									

¹ Six percent discount rate; 50 years.

Table G-5c
Water Sales Revenue (Vendibility)

Parties Purchasing Project Supplies (a)	Annual Amount of Water to be Sold (AF) (b)	Projected Selling Price (\$/AF) (c)	Annual Expected Sales Revenue (\$) (d) (b x c)	Option Fee ¹ (\$) (e)	Annual Expected Total Revenue (\$) (f) (d + e)
Total					

¹ Option fees are sometimes paid by a contracting agency to a selling agency to maintain the right of the contracting agency to buy water whenever needed. Although the water may not be purchased every year, the fee is usually paid every year.

Table G-5d
Lift Benefits

(a)	Average Annual Water in Storage (AF) ²	
(b)	Area (Acres) ³	
(c)	Storage Coefficient	
(d)	Change in Depth to Groundwater (FT) ⁴	
(e)	Pumping Costs (\$/AF/FT)	
(f)	Volume Pumped (AF/YR) ⁵	
(g)	Annual Lift Benefit (\$) (d) x (e) x (f) ⁶	

² From Table G-1, row b.

³ Project area overlying groundwater basin.

⁴ [(a) x (b)]/(c)

⁵ Volume pumped by all groundwater users overlying basin. Exclude in-lieu recharge from project.

⁶ Equal to: (pumping costs) x (volume pumped) x (change in depth).

Table G-5e
Total Benefits

(a)	Annual Avoided Costs of Current Supply Sources (\$) (from Table G- 5a, column d total)	
(b)	Annual Avoided Costs of Future Supply Sources (\$) (from Table G- 5b, column j total)	
(c)	Annual Expected Water Sales Revenue (\$) (from Table G-5c, column f total)	
(d)	Annual other economic benefits (\$) ¹	
(e)	Annual lift benefits ²	
(f)	Total Annual Project Benefits (\$) (a + b + c + d + e)	
(g)	Discounted Project Benefits (\$) (f x 15.7) ³	

¹ Annual costs of shortages as an alternative to the project must be fully documented.

² Table G-5e, row g

³ Discounted water supply benefits for 50-year period with discount rate of 6 percent.

Table G-6
Benefit/Cost Ratio

(a)	Total Discounted Project Benefits (\$) ⁴	
(b)	Total Discounted Project Costs (\$) ⁵	
(c)	Benefit/Cost Ratio (a / b)	

⁴ From Table G-5e, row (g)

⁵ From Table G-4, column (c)

Part H

Ranking Criteria

The information provided in Part H, supported by information in Parts A through G, will be used to score complete applications that meet all of the Eligibility Criteria. Each Ranking Criterion will be scored on a scale of 1 to 5, with 1 being "Low" and 5 being "High." The ranking will be based on the responses of the applicant with respect to each criterion, as well as on the supporting documentation. The score for each criterion will then be multiplied by a weighting factor to achieve a weighted score for each criterion. The sum of the weighted scores for each criterion will result in a total score for the application (maximum of 35 points per application). The total score for each application, along with recommendations from the Conjunctive Use Advisory Committee, will be used by DWR to select projects for funding as described in the section entitled "Application Evaluation and Selection Process" of this application package.

Applicants are limited to a two-page summary for each of the following Ranking Criteria. Additional supporting documentation beyond the two-page limit may be submitted as attachments or appendices to the application.

H-1 Need for the Project

Relative to the need for the project, describe the current water system conditions, the agency's current sources of water (including substitute supplies and existing facilities), and any mismatch between these current water system conditions and projected agency demand. Tables C-1 and C-2 can be referenced to quantify unmet current and future demands. Describe how the proposed groundwater storage project will help meet those needs. Refer to the information in Table C-3 to describe the degree to which the proposed project would increase water supply reliability and fulfill long term need.

Describe other conditions that contribute to the need for the project. Examples of critical need that could be documented are:

- ✓ Water deliveries have been or would be interrupted following a natural disaster;
- ✓ Water needed to prevent aquifer subsidence that would result in permanent reduced yield and storage capacities, and damage to infrastructure;
- ✓ Seawater barrier to protect groundwater supplies from long term threat;
- ✓ Permanent plants or crops (such as landscapes, vineyard, and orchards) that would suffer irreversible loss because of water shortages; and
- ✓ Public health and safety impacts currently occur or are projected to occur due to shortages.

Provide a detailed narrative description of the expected impacts within the community if the proposed groundwater storage project is not constructed. Impacts could be to population, employment, business and industry, irrigated acreage, emergency supplies, water quality, agency loss or gain of revenue, public safety, agricultural conversion to urban water uses, and environment. Discuss the local and regional economic and fiscal impacts and benefits relative to the need and criticalness of the proposed project. This discussion should be consistent with the economic evaluation in Section G, where appropriate.

The need must be supported by sound economic, scientific analysis, and/or historical documentation. Projects with the most critical need will receive a score of 5. Critical need is where significant negative local or regional consequences will occur if a project is not implemented. Examples of critical need are described above. Projects with a moderate need will score 3. A moderate need is where water supply reliability and long term need are demonstrated, but the applicant does not demonstrate any critical need. If the applicant

fails to demonstrate need and no negative consequences would occur if the project is not implemented, the project will score 1.

Mark as Attachment H-1

H-2 Basin-Wide -Planning

Provide a detailed narrative description of how the proposed project fits into plans for the entire groundwater basin or sub-basin. Include a description of how the applicant has sought or plans to seek the involvement and input of other stakeholders, including, but not limited to, agricultural interests, water interests, environmental interests, other groundwater users in the basin, potentially impacted low-income and minority communities, and tribes overlying or using the groundwater basin. The applicant should provide a list of stakeholders in their basin, and discuss how they arrived at that stakeholder list. Stakeholder involvement can be demonstrated through a written summary of activities and agreements reached, supported by the following that can be attached as an appendix:

- ✓ Any Memoranda of Understanding
- ✓ Chronology of meetings, briefings, etc.
- ✓ Meeting minutes
- ✓ Published notices of public meetings and sign-in sheets
- ✓ Meeting invitations/agendas mailed to potential stakeholders, including potentially impacted low-income and minority communities and tribes
- ✓ News articles or television coverage
- ✓ Fact sheet mailers to affected citizens
- ✓ Letters of support
- ✓ Written consensus statement signed by stakeholders, including potentially impacted low-income and minority communities and tribes
- ✓ An integrated regional plan that identifies the proposed project as a qualified project in accordance with California Water Code Section 10530 et seq.

Be sure to include a description of how local agencies whose jurisdiction or water service area overlies or is adjacent to the aquifer utilized to store water will be involved in the project.

Describe any opposition to the proposed project. Identify the party(ies) in opposition, and briefly discuss the situation. Include copies of materials as identified above.

Applicants will score 5 on this criterion if they have completed a basin-wide planning effort with broad stakeholder involvement that includes support for the proposed project, and have thoroughly documented the effort. Applicants will score 4 if basin-wide planning is nearing completion, is well documented, and demonstrates support for the project. Applicants will score 3 if basin-wide planning efforts are clearly underway, and the project is being considered. Applicants will score 2 if basin-wide planning is just getting started or is being proposed. Projects that will not be considered as a part of a basin-wide planning effort will score 1.

Mark as Attachment H-2

H-3 Groundwater Management Program

Provide a summary narrative of the agency's groundwater management program and its relationship to the proposed project. Include a list of activities provided for under the groundwater management program and the status of each activity. Identify the goals and objectives of the plan and progress in meeting them. Also include a list of agencies and other entities that participated in the development and/or implementation of the program. Discuss past, ongoing, or proposed conjunctive management programs and their accomplishments.

Applicants that demonstrate an established and effective groundwater management program that includes or allows for the proposed conjunctive water management project will score 5. Applicants that have adopted a groundwater management program and include a list of activities and participants, but cannot demonstrate implementation of significant program activities will score 3. Applicants that have not adopted a groundwater management program will score 1. Others will score 2 or 4 depending on the demonstration of groundwater management program effectiveness.

Mark as Attachment H-3

H-4 Readiness to Proceed with the Project

Assuming the project is selected and the contract is executed by June 1, 2004, and taking into consideration completion of all required environmental documentation and completion of final plans and specifications, indicate the expected construction start date. (This information must correspond with the information contained in the project schedule, Section C-11, and the schedule must be determined to be reasonable.):

- ☐ Within six months from the date funded;
- ☐ Within nine months from the date funded;
- ☐ Within one year from the date funded;
- ☐ Within 15 months from the date funded;
- ☐ Greater than 15 months from the date funded—Specify the number of months until construction is anticipated to begin: _____.

Applicants that are ready to begin construction within six months will be scored 5 for this criterion, within nine months will be scored 4, within one year would be scored 3, within 15 months will be scored 2, and greater than 15 months will be scored 1.

Mark as Attachment H-4

H-5 Economic Efficiency

This criterion is designed to evaluate all quantifiable direct economic benefits accruing to project participants, relative to the cost of the project. Any expected third party economic benefits arising from the project may be described under H-1 and should not be included in H-5. Information on water supply benefits and pumping lift benefits to project participants was enumerated in Section G of this application. Those benefits and costs will also be considered in this ranking criterion. If you wish to perform an alternative analysis procedure (i.e., different than done for the Economic Justification in Part G) to better support the demonstration of economic efficiency, include the analysis, all supporting documentation, and all assumptions. In addition to water supply and pumping lift benefits, provide an analysis of other quantifiable

direct economic benefits, which may include: avoided wastewater disposal costs, water quality improvements, and operations and maintenance cost savings.

When economic values cannot be estimated for other expected project benefits, either because accepted methods of economic valuation are not available or the applicant has not done the necessary research, these expected project benefits should be quantified in physical terms for this ranking criterion. For example improvements in water quality might be displayed as reduced mg/L TDS of water delivered to users.

Any expected project accomplishments that cannot be assigned a numerical value, either in dollars or in specific physical quantities, should be described as completely as possible.

For the purposes of evaluating the economic efficiency of projects, reviewers will use the benefit/cost information provided in Tables G-1 through G-7, as well as information on other types of quantifiable benefits provided in this section. Each application will receive a ranking relative to the economic efficiency of all applicants. The projects providing the highest economic efficiency (highest B/C ratio) will be ranked 5. The projects with the lowest economic efficiency will be ranked 2, and all others will be scaled accordingly. Projects for which yield or cost information is determined to be inaccurate, unsubstantiated, or not credible will score 1 on this criterion.

Mark as Attachment H-5

H-6 Adequacy of Supporting Documentation for Determination of Engineering and Hydrogeologic Feasibility

DWR is required under the Bond Law to make a determination that the projects selected for funding are economically justified and feasible. This ranking criterion relates to the quality and completeness of the documentation of engineering and hydrogeologic feasibility provided by the applicant. The supporting material must be appropriate to the nature and complexity of the proposed project.

The applicant must provide information of a quality and level of detail sufficient to allow an independent evaluation of the engineering and hydrogeologic feasibility of the proposed project, in order to support DWR's review. Applications will be scored as follows:

- Applications that clearly demonstrate the engineering and hydrogeologic feasibility of the proposed project, and have addressed the requirements of all sections of Part C of this application with high quality supporting documentation appropriate to the project will be scored 5.
- Applications that have fully addressed the requirements of Part C, Sections C-2, C-3, C-9, and C-11 with high quality supporting documentation, but do not fully address any one section of the remainder of Part C will be scored 4.
- Applications that do not fully address any one section of Part C, Sections C-2, C-3, C-9, or C-11, or do not fully address two or three sections of the remainder of Part C will be scored 3.
- Applications that do not fully address any two sections of Part C, Sections C-2, C-3, C-9, or C-11, or do not fully support four or more sections of the remainder of Part C will be scored 2.
- Applications that provide little or no supporting documentation to demonstrate the engineering and hydrogeologic feasibility of the proposed project will be scored 1.

Mark as Attachment H-6

Appendix I

Checklist of Attachments

Complete this checklist to confirm all sections and attachments to this application package have been completed.

Part A

- ☐ A-1 Application cover sheet;
- ☐ A-2 Agency representatives;
- ☐ A-3 Project costs;
- ☐ A-3 Project budget-capital costs;
- ☐ A-4 Plat map of service area;
- ☐ A-5 Authorizing resolution;
- ☐ A-6 Financial statements;
- ☐ A-7 Cash reserves;
- ☐ A-8 Existing debt;
- ☐ A-9 Repayment method;
- ☐ A-10 Loan security;
- ☐ A-11 Rate service structure;
- ☐ A-12 Population data;
- ☐ A-13 Agency authority;
- ☐ A-14 Operation and maintenance; and
- ☐ A-15 Urban Water Management Plan Compliance.

Part B

- ☐ B-1 Map and narrative description of project;
- ☐ B-2 Legal description of project site; and
- ☐ B-3 Project summary.

Part C

- ☐ C-1 Engineering feasibility certification statement (Figure C-1a);
- ☐ C-1 Hydrogeologic feasibility certification statement (Figure C-1b);
- ☐ C-2 Water source and availability;
- ☐ C-3 Water supply yield and reliability;
- ☐ Table C-1 Historical target deliveries and actual deliveries for the agency's service area;
- ☐ Table C-2 Agency's water system performance without the proposed project;
- ☐ Table C-3 Agency's water system performance with the proposed project;
- ☐ C-4 Soil and aquifer parameters;
- ☐ C-5 Extraction Capability;
- ☐ C-6 Water quality;
- ☐ C-7a Overdraft reduction;
- ☐ C-7b Saline concentration trends;
- ☐ C-7c Other concerns;
- ☐ C-8 Project reports and previous studies;
- ☐ C-9 Project plans and specifications;
- ☐ C-10 Construction inspection plan; and
- ☐ C-11 Project Work Plan, Budget, and Schedule.

Part D

- ☐ D-1 CEQA/NEPA documentation;
- ☐ D-2 Permits, easements, licenses, acquisitions, and certifications;
- ☐ D-3 Local land use plans; and
- ☐ D-4 Federal, State, and local statutes and regulations.

Part E

- ☐ E-1 Protection and preservation of water rights;
- ☐ E-2 Groundwater monitoring and mitigation; and
- ☐ E-3 Extraction limitation.

Part F

- ☐ Not used for this application.

Part G

- ☐ G Project performance, project costs, and project benefits (Include Tables G-1 through G-6).

Part H

- ☐ H-1 Need for the project;
- ☐ H-2 Basin-wide planning;
- ☐ H-3 Groundwater management program;
- ☐ H-4 Readiness to proceed with the project;
- ☐ H-5 Economic efficiency; and
- ☐ H-6 Adequacy of Supporting Documentation for Determination of Engineering and Hydrogeologic Feasibility.

Appendix II

Sample Resolution

Resolution No. _____

Resolved by the _____
(Governing body, city council, or other)

of the _____
(Agency, city, county, or other)

that pursuant and subject to all of the terms and provisions of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act (California Water Code Section 79000 et seq.), and amendments thereto, application by this _____
(Agency, city, county, or other)

be made to the California Department of Water Resources to obtain a groundwater recharge project construction loan.

The _____ of the
(Presiding officer, President, City Manager, or other official)

_____ is hereby authorized and directed to prepare the
(Agency, city, county, or other)

necessary data, make investigations, sign, and file such application with the California Department of Water Resources.

Passed and adopted at a regular meeting of the _____ of
the _____
(Agency, city, county, or other)

on _____ .
(Date)

Authorized Original

Signature _____

Printed Name _____

Title _____

Clerk/Secretary _____

Appendix III

Definitions

The words used in this application package have the meanings set forth below:

- a. "Applicant" means a party that files an application for funding under the provisions of the Bond Law with the Department of Water Resources;
- b. "Basin-wide planning" means a planned, comprehensive approach for the management of groundwater and surface water resources within a groundwater basin or sub-basin. This approach involves (1) a clearly described plan to solicit input and collaboration among basin stakeholder groups; (2) a method for identifying and resolving related issues and impacts; and 3) a process to identify and prioritize specific projects and goals for the basin. Stakeholder groups may include local agencies, State and federal governmental agencies, community groups, water districts, and agricultural, environmental, and business interests;
- c. "Bay-Delta" is as defined in Section 79006 of the California Water Code;
- d. "Bond Law" means the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act; Groundwater Storage Program, under the Water Supply, Reliability and Infrastructure Account, as set forth in division 26, chapter 9, article 2 of the California Water Code (commencing at Section 79170);
- e. "Department" means the Department of Water Resources;
- f. "Eligible costs" means costs that may be funded under the Bond Law. Eligible costs include the reasonable costs of engineering, design, land and easement acquisition, legal fees, preparation of the application to establish eligibility, preparation of environmental documentation, environmental mitigation, and project construction. Costs incurred prior to applying for or entering into a contract for funding, including costs for feasibility study done solely to assist in the preparation of a construction application, may be reimbursed from the grant proceeds at the Department's discretion.
 1. Costs that are not eligible for grant funding include, but are not limited to:
 - i. Costs, other than those noted above, incurred prior to applying for or receiving a grant;
 - ii. Operation and maintenance costs;
 - iii. Purchase of equipment not an integral part of the project;
 - iv. Establishing a reserve fund;
 - v. Purchase of water supplies;
 - vi. Replacement of existing funding sources for ongoing programs;
 - vii. Support of existing agency requirements and mandates;
 - viii. Purchase of land in excess of the minimum required acreage necessary to operate as an integral part of the project, as set forth and detailed by engineering and feasibility studies; and
 - ix. Payment of principal or interest of existing indebtedness or any interest payments unless the debt is incurred after issuance of a letter of commitment of funds by the Department, the Department agrees in writing to the eligibility of the costs for reimbursement before the debt is incurred, and the purposes for which the debt is incurred are otherwise eligible project costs.

- g. "Engineering feasibility" means a determination by a California registered civil engineer that the proposed project can be designed, constructed and operated to accomplish the purposes for which it is planned, and that it is planned in accordance with generally accepted engineering principles and concepts;
- h. "Environmental documentation" means written documents prepared and filed in accordance with the California Environmental Quality Act (Division 13, Public Resources Code commencing with Section 21000), the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15000, *et seq.*), the National Environmental Policy Act (Title 42, U.S.C., Section 4321, *et seq.*), and all other applicable environmental laws;
- i. "Feasibility study" means a study conducted for the purpose of determining the engineering, hydrologic, hydrogeologic, environmental, economic, institutional, and financial feasibility of a proposed project. Feasibility study results should provide most of the information needed to develop a complete construction grant application. Feasibility studies must be project specific. General planning studies, reconnaissance level studies, management studies, and/or research studies are not eligible;
- j. "Financial feasibility" means a determination by the Department that the applicant can complete the project or feasibility study with the amount of funds requested in the grant application. If the project or feasibility study cannot be completed within the amount of the grant requested, but the applicant can establish to the Department's satisfaction that additional funds from other sources are available to complete the project or feasibility study, the Department may determine that the project or feasibility study is financially feasible. This determination will be contingent upon the applicant establishing to the Department's satisfaction that the applicant has the ability to repay any loans identified as additional sources of funds for completion of the project or feasibility study;
- k. "Groundwater" means all water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include flows in known and definite channels;
- l. "Groundwater basin" means any basin identified in the Department's Bulletin No. 118, dated September 1975, and any amendments to that bulletin including the draft Bulletin 118-2002;
- m. "Groundwater management program" means any formalized program or plan for management of groundwater and surface water within a groundwater basin or other specified geographic area implemented by an agency with appropriate authority. Formalized programs and plans are written documents that have been adopted by the agency's governing body;
- n. "Groundwater recharge" refers to the addition to the water within the earth that occurs naturally from infiltration of rainfall and from water flowing over the earth materials that allow water to infiltrate below the land surface;
- o. "Hydrogeologic feasibility" means a determination by a California registered geologist that the proposed conjunctive water management project will result in sufficient operable storage capacity to achieve project purposes including storage of water in the aquifer intended to be recharged and that the water stored by this project can be economically extracted for later use;
- p. "In-lieu recharge" means accomplishing increased storage of groundwater by providing interruptible surface water to a user who relies on groundwater as a primary supply to accomplish groundwater storage through the direct use of that surface water in lieu of pumping groundwater;

- q. “Local agency” means any city, county, city and county, district, joint powers authority, or other political subdivision of the state involved with water management. Local agency also means a mutual water company;
- r. “Overdraft” means the condition of a groundwater basin or aquifer where the average annual amount of water extracted exceeds the average annual supply of water to that basin or aquifer;
- s. “Target deliveries” means the quantity of water an agency plans to deliver during a specific time period. This quantity can be based on contract entitlements, expected demand at a fixed price, or other acceptable planning approaches; and
- t. “Third party funding” means funding to be applied to the total project cost from sources other than the Central Valley Project Restoration Fund authorized by the Central Valley Project Improvement Act. Sources for third party funding may include loans or grants from other governmental agencies, conventional sources, or cost sharing by other participant entities.